LESSONS FROM REGIONAL MARINE PLANNING BY FEDERAL AGENCIES – THE NATIONAL ESTUARY PROGRAM

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Background on the National Estuary Program.[1] Estuaries are tidal, sheltered waters that support unique communities of plants and animals that live at the margin of the sea, and are often the cultural centers of coastal communities, serving as the focal points for local commerce, recreation, celebrations, and traditions. Across the United States, development is increasingly concentrated along the coast, with about 820,000 new homes and more than half of all new industrial, office, and retail building constructed in coastal areas annually.[2] Evidence is mounting that many coastal environmental quality problems are the result of development pressures. As these pressures result in changes in the way coastal ecosystems function, the ecological and economic values of coastal areas are being threatened, and many of the qualities that initially attracted people to coastal watersheds are diminishing.

The National Estuary Program (NEP) was established in 1987 by amendments to the Clean Water Act (Section 320) to identify, restore, and protect nationally significant estuaries of the United States. The Governor of a State must nominate an estuary before it can be accepted into the NEP. After EPA review and acceptance into the national program, a Management Conference is formed to provide the local decision-making framework for the estuary. The Management Conference is a collection of committees that directs the day-to-day development of the management plan for the estuary. The Management Conference typically includes local governments, affected businesses and industries, public and private institutions, non-governmental organizations, the general public and representatives from EPA, other Federal agencies, State governments, and interstate or regional agencies. Representatives on the Management Conference speak for and bring information back to their constituencies, agencies, and organizations. In addition to being a Management Conference

participant, EPA provides financial and technical assistance, and reviews program performance.

The Management Conference defines program goals and objectives, identifies the extent and causes of the estuary's environmental problems, and designs action plans to prevent or control pollution and restore habitats and living resources. These action plans come together in a *Comprehensive Conservation and Management Plan* (Management Plan or CCMP), which serves as a blueprint for protecting and restoring the estuary. The Management Conference ensures that estuary-specific information, issues, and priorities are factored into the NEP process. Twenty-eight estuaries have been designated to the NEP since 1987.

Unlike traditional, regulatory approaches to environmental protection, the NEP targets a broad range of issues and encourages communities to develop common solutions. Staff scientists, policy analysts, and outreach coordinators work with local communities to identify problems and create consensus-based actions to address problems facing their watersheds. The fundamental concepts fostered by the NEP in coastal areas have evolved from its environmental management predecessors, including the Chesapeake Bay Program. The cornerstones of the NEP, drawn from these predecessors, include a focus on watersheds as the basic environmental management unit, the integration of good science with sound decision-making, a collaborative approach to problem solving, and the critical role of public participation.

EPA provides technical, financial, and administrative support to individual estuary programs and their EPA Regional offices; serves as a liaison with States, other EPA programs, other Federal agencies, and various organizations that support coastal watershed management programs; and helps facilitate the transfer of tools and lessons learned to other coastal watersheds. An example of the success of the program is that, as of 2001, the 28 National Estuary Programs have protected or restored over 1,000,000 acres of coastal habitat.

Some Lessons Learned

Lesson # 1: Community-Based Resource Management Can Achieve Results. Building an effective management and decision-making framework requires commitment, close collaboration on the part of participants, and time. It is especially important that there is close coordination among

Federal, State, and local governments. NEPs have been the catalyst to bring together various levels and branches of government that had previously never worked cooperatively – thereby providing more comprehensive management and expediting the regulatory review process.

It is critical that the appropriate stakeholders be involved in the programs during the early stages of development of the CCMP. The consensus-building process used by the stakeholders must reflect the character of the local community and balance the divergent needs and interests of the coastal stakeholders. The success of any watershed management program ultimately depends on citizen support and involvement – to ensure that funds are made available to support planning and implementation, for the successful implementation of actions aimed at changing day-to-day behaviors in the watershed, and for ensuring public involvement in the decision-making process.

Public involvement is used to guide program development, identify priority issues, build local support, and evaluate progress. The strong public participation efforts of the NEP suggest that they are well equipped to work within the context of, and improve the capacity for, decentralized governance. The NEPs successfully integrate different levels of government (Federal, State, local) and sectors (e.g., fisheries, coastal tourism, port development) through the development and implementation of actions and projects in their Management Plans.

Lesson #2: Governance Structures Will Vary. NEPs receive Federal funding from EPA, which they leverage and match with State, local, and private funds. The NEP staff are employed in a variety of administrative structures, including State agencies, EPA Regional offices, and nonprofit organizations. The programs also demonstrate a range of ways in which citizens are involved and have decision-making power in their management structure.

Because each estuary is a unique body of water, its problems, citizen concerns and preferences, State and local governments, and institutions are also unique. Local needs and values are among the important forces driving the creation of a specific management organization framework that will determine program goals and objectives and how to achieve them. As a local-State-Federal partnership, the framework must also take into account differences in how State and local governments are organized, and allow for adequate flexibility. The division of responsibilities

among resource, water, and commerce agencies, and the degree of centralization in environmental planning, are equally important considerations. Program planning and management for each estuary involves a somewhat different mix of agencies and levels of representation. Flexibility is key for a dynamic program that allows both structure and strategy to be modified in response to successes, failures, political realities, and unforeseen problems.

In developing a governance structure for overseeing Management Plan implementation, an NEP investigates a variety of different approaches and identifies the solutions that are best suited to its specific needs. Most NEPs are based within an existing agency of local, State, or Federal government. Some NEPs are located within an academic institution or other non-regulatory agency. However, as the NEPs transition from management plan development to implementation, several have explored alternative structures. A few NEPs have created non-profit arms of their organizations, or have become nonprofit organizations. Regardless of institutional structure, the NEPs implement some actions independently and oversee the implementation of actions by partners in others. Usually, the implementation responsibility for specific actions is defined in the Management Plan. NEPs seldom possess any legal authority of their own to require implementation, instead they influence the implementation process primarily through consensus reached among the participating entities. This often includes implementing agencies that do have legal authority to require implementation. Therefore, the NEPs rely on existing organizational structures rather than the creation of new oversight entities.

To carry out the operations of the estuary program, each NEP establishes a committee structure to meet its particular needs. Again, the NEPs examine the community of the estuary: how decisions are reached, what perceptions are prevalent, and who or what institutions are influential. The size of the community also makes a difference. For instance, a comparatively small area, located within a single State, requires a simpler committee structure than a much larger, interstate estuary. Generally, the structure consists of a policy-making committee, a management committee, work groups or subcommittees, and other standing committees including a scientific and technical advisory committee, a citizens advisory committee, and often a local government committee and a financial planning committee.

Lesson #3: Setting Measurable Environmental Goals and Indicators is Important. Each NEP sets specific goals and indicators against which progress can be readily measured. These measures allow the NEPs to monitor environmental conditions and environmental responses to restoration efforts, inform and involve the public in achieving restoration goals, provide information to establish restoration goals, and calibrate and refine ecosystem models that furnish long-term databases for estuary research. These measures evolve through extensive meetings with partners and stakeholders using a variety of techniques, such as public meetings, planning *charrettes*, focus groups, and comparative risk ranking. One NEP, for example, adopted a single set of measurable goals aimed primarily at restoring and protecting that estuary's seagrasses and managing water quality as needed to support the habitat restoration goals. In that case, instead of assigning responsibilities to participating agencies or local governments for implementing certain actions, all participating partners commit as a whole through a formal Interlocal Agreement to take the actions necessary to achieve the specific, measurable goals adopted in the Management Plan. As a result, participating agencies are not restricted to the actions itemized in the Management Plan to achieve the agreed-upon goals. Participants are given the flexibility to choose the options that make the most sense given the opportunities and resources available to their communities.

Lesson # 4: Environmental and Programmatic Monitoring are Critical. Programs must invest in environmental and programmatic monitoring to assess progress in implementing comprehensive conservation and management plans as well as changes in environmental conditions and the emergence of new coastal challenges. As implementation of NEP management plans proceed, each activity is reviewed, evaluated and redirected as necessary. Demonstrating results is a challenge. The causal link between management actions and environmental results are not always clear. Just as many environmental impacts develop over years, reversing those impacts is likely to take time -- which may make it difficult to maintain public support during implementation. Even in cases where improvement in environmental indicators can be measured and linked to actions that have been implemented, these indicators may not always be meaningful to the public (e.g., increases in dissolved oxygen levels or decreases in bacteria may show results, but those results might have more public support if they could be equated to abundance of fish, or the opening of closed shellfish beds and bathing beaches). One method used by the NEPs to bridge the gap between the long-term nature of environmental improvements and the need to demonstrate short-term results to

stakeholders, is to integrate programmatic indicators with available environmental indicators to measure outcomes of management programs. For example, a "Report Card" can communicate the status of the top issues, changes in public awareness of the issues over the years, funding, and effectiveness of efforts to address the issues. The report card can also serve to educate the public about emerging issues and new priorities for the future.

The NEPs are moving beyond single measures of environmental conditions, such as dissolved oxygen, to comprehensive ecosystem-based indicators, such as fish community composition, submerged aquatic vegetation extent and density, and physical habitat. The latter are better measures of the overall integrity of the estuary and can provide advance warning of emerging problems in the watershed.

Lesson #5: There are Common Coastal Environmental Problems and Challenges. Between 1960 and 1990, the population of the nation's 673 coastal counties grew by more than 38 million people (an increase of 41 percent) and by 1990, more than 133 million people -- representing 54 percent of the total U.S. population at the time, resided in less than 17 percent of the land area in the contiguous United States – along the Atlantic and Pacific Oceans, Gulf of Mexico, and Great Lakes.[3] Stresses caused by pollution, excessive demands on limited resources, and expansive development have resulted in a host of human health and natural resource problems.

Experts at the National Oceanic and Atmospheric Administration's (NOAA) 1999 National Assessment Workshop determined that the severity and extent of eutrophic conditions are expected to worsen in more than half of the nation's estuaries, and along the coasts, by 2020. Their predictions are based on projected population growth, coupled with susceptibility to nutrient inputs (e.g., fresh water inflow, tidal flushing, and degree of stratification – which influence the transport and fate of nutrients in coastal water bodies, and help determine the susceptibility of an estuary to retain nutrients).[4]

While each estuary is unique, the estuaries of national significance confront common problems: over-enrichment of nutrients, loss of habitat, alteration of freshwater inflow, contamination from pathogens and toxic chemicals, decline in fish and wildlife, and introduction of invasive species.

In implementing efforts to meet these challenges, the NEPs share information and transfer technologies, and some common solutions have emerged.

Lesson #6: The NEPs are demonstrating the ability to address emerging issues. The NEPs are well poised to address emerging issues, even when those issues had not been originally identified through the comprehensive planning process. Two examples of this kind of adaptive management can be seen in the programs' reaction to threats from invasive species and poorly planned development.

Because land use decisions occur at the State and local level where NEPs operate, some of the programs have demonstrated that inter-jurisdictional coordination at the watershed or regional level on "smart growth" initiatives can create more effective protection of water resources through thoughtful community land use planning.

Several NEPs have taken a leadership role in meeting the challenge of Aquatic Nuisance Species (ANS), providing the first comprehensive assessment of marine invasive species in their watersheds, conducting ANS field surveys, collecting and identifying sample specimens, and determining whether the specimens are indigenous, invasive, or cryptogenic; and using data from their assessments to develop State Aquatic Nuisance Species Management Plans as well as NEP- specific and/or regional assessment, monitoring, and rapid response plans.

Some NEP pilot projects on ANS aim to enhance the public's understanding of aquatic nuisance species and their local/ecosystem impacts, and the roles that the public and decision- makers can play to prevent and mitigate those impacts. The awareness effort can include development of public education materials such as signs, a website, radio messages, and tips for prevention, as well as creation of a clearinghouse for citizens to report sightings of unusual plants or animals.

Another area where the NEPs are providing approaches to emerging challenges is in the development and implementation of "Total Maximum Daily Loads" or TMDLs. A TMDL defines the pollutant load that a waterbody can assimilate without causing violations of water quality standards, and allocates the loading between contributing point sources and non-point source

categories. Long Island Sound NEP is an example of how the NEP's close partnership with multiple levels of government -- dozens of municipalities, the states of New York and Connecticut, and the Environmental Protection Agency (EPA) -- fostered an innovative TMDL. The LIS NEP's management plan called for reductions in point and nonpoint source nitrogen loading to the Sound to improve water quality and reduce hypoxia. The LIS NEP worked with the EPA, States, and local governments to adopt aggressive nitrogen reduction targets in 1998 and then to adopt a nitrogen TMDL for the Sound in 2001. This TMDL establishes an enforceable schedule for point and nonpoint nitrogen reduction to the Sound over a 15 year period ending in 2014. The LIS NEP helped Connecticut develop a general permit to incorporate nitrogen load limits for participating publically owned treatment works in the watershed. The LIS NEP also fostered New York's bubble permit proposal for dischargers to the Sound. The Connecticut general permit scheme incorporates a nitrogen credit trading program that, in concert with the TMDL limits, sets a precedent in finding new ways of meeting water quality standards while keeping costs down for taxpayers. The TMDL is posted on LIS NEP's website.

Lesson # 7: Identifying Sustainable Levels of Funding are Key. Successful NEPs have a broad spectrum of funding sources. The NEPs have learned that a wide variety of funding sources -- public and private, local, state and federal, direct and indirect -- must be secured to achieve their goals and control the pace of their progress. For example, the NEPs have tapped, either directly or through their partners, the State Clean Water Revolving Fund, municipal bonds, fines and settlements, tax abatements and incentives, and sales fees. For one NEP a key revenue source is a two percent real estate transfer tax, an assessment made by the county on land and deed transfers based on the sales price of property. Five towns surrounding the estuary have raised nearly $70 million in less than three years (April 1999 to September 2001) with the tax.

Success leads to more funds. NEPs which are successful at financing tend to attract additional funding from various sources and through partnerships with other successful organizations. In some cases the NEPs have strengthened the capacity of their partners to obtain funding. For example, one NEP received $1.13 million in EPA Section 320 funds during the three years from September 1998 through August 2001. Through a combination of appropriations, grants, and in-kind contributions, this NEP raised an additional $8.88 million during this time period; $7.87

raised for every $1 of EPA support. The rate of leveraging increased dramatically from 1999 to 2001, starting at about $1:$1 in 1999 and reaching a level of approximately $20:$1 in 2001. The same NEP also created a land trust that has proved successful in acquiring funds to protect habitat in the watershed.

Financial Planning is critical. NEPs that are successful at raising funds usually develop strategic financial plans that they integrate into their on-going management and planning efforts. These NEPs are more aware of the funding landscape and thus are able to take advantage of new approaches to funding, such as storm water utilities. As a result of focusing their fund-raising efforts on sources most likely to yield returns, these NEPs have more time available for implementation activities.

End Notes

1. The National Estuary Program or "NEP" refers to both the national program made up of 28 programs and the 28 individual programs themselves.

2. NOAA's Coastal Population and Development Home Page

3. 50 Years of Population Change Along the Nation's Coasts: 1960-2010, NOAA April 1990

4. Bricker, S.B., C.G. Clement, D.E. Pirhalla, S.P. Orlando, and D.R.G. Farrow. 1999. *National Estuarine Eutrophication Assessment: Effects of Nutrient Enrichment in the Nation's Estuaries*. NOAA, National Ocean Service, Silver Spring, MD: 71pp

Appendix
Cornerstones and Success stories from the NEPs

Cornerstone 1: Focus on the watershed and ecosystems. The NEPs use geographic and ecosystem-based approaches to address complex environmental problems found in estuaries. This approach targets and manages hydrologically defined basins or watersheds and the ecological communities that exist within them. The NEPs are moving beyond single measures of environmental conditions, such as dissolved oxygen, to comprehensive ecosystem-based indicators, such as fish communities and habitat. The latter are better measures of the overall integrity of the estuary and its watershed. Defining management areas according to hydrologic boundaries and ecosystems allows the NEPs to better understand and address environmental problems because contaminants do not conform to political jurisdictions. It also allows the NEPs to draw upon the full range of available management resources and tools, regardless of political jurisdiction. The NEPs thus take a multi-jurisdictional approach to problem identification and solving.

Cornerstone 2: Integration of good science with sound decision-making. Decision-making should be based on the best information and science available. Sound science provides objective information that informs debate, provides data on the status and trends of the estuary and causes and consequences of actions, and provides a basis for policies and programmatic decisions. Science, however, is in part the product of the public participation process. Stakeholders and partners play a key role in identifying problems to be assessed and collecting the data needed to form conclusions. The iterative nature of this approach encourages partners to set goals and targets and to make maximum progress based on available information, while continuing analysis and verification in areas where information is incomplete.

Cornerstone 3: Collaborative problem-solving. As an environmental management approach, collaboration involves creating a shared vision and joint strategies to address concerns that go beyond any particular interest or stakeholder's purview. Through listening and learning, successful collaboration achieves results. Conflicting needs and uses are balanced without compromising the environmental goal of restoration and maintenance of the estuary. Consensus-based decision-making is used to ensure that collaborative decisions are made with the input of the stakeholders and that all options, suggestions, and opinions are treated as worthy of consideration.

Cornerstone 4: Public participation. The success of any watershed management program ultimately depends on citizen support and involvement – to ensure that: (1) funds are made available to support planning and implementation; (2) actions aimed at changing day-to-day behaviors in the watershed are implemented; and (3) opportunities are available for the public to voice their interests in a way that can lead to a mutual understanding of the issues. In the long run, the support of the public and private interests will be required to implement measures needed to maintain and restore the watershed. These measures may include additional taxes to pay for sewage treatment and sediment controls, changes in lawn care and agricultural practices, and stricter regulations on wastewater dischargers. An informed and involved citizenry is often the management program's most valuable asset for mustering the critical

support needed to implement these kinds of actions.

The following examples of NEP actions and projects provide a few of the approaches successfully taken by different NEPs to tackle these issues. In many cases, actions and projects address multiple problems simultaneously, such as construction of wetland habitat to reduce pathogen contamination and increase nursery acreage for wetland-dependent species. Specific information on the goals, objectives, and actions leading to the implementation efforts described below can be found in the Management Plans of the referenced NEPs. In addition to the examples provided below, the Management Plans developed by the existing 28 NEPs contain a vast variety of actions addressing a multitude of issues.

Example 1: New legislation requiring advanced wastewater treatment to address loss of seagrasses due to excess nutrients.

The Sarasota Bay National Estuary Program evaluated the effectiveness of Florida's Grizzle Figg legislation promulgated in 1990 aimed at controlling the amount of nutrients entering the Bay. (http://pelican.gmpo.gov/gulfofmex/estuarypartner/Sarasota/SarasotaBay.html). The legislation requires that wastewater discharged directly to surface waters meet advanced wastewater treatment standards (3 mg/l for nitrogen). To meet the legislative requirements, most municipal and private wastewater treatment plants modified operations. During the same period, problems with regard to saltwater intrusion and the impact on the Floridan Aquifer were made public. The SBNEP sponsored research and engineering analysis to promote the optimum reuse of wastewater through a regional reuse system that minimized discharge to the Bay and provided an alternative source of water. Aquifer storage and recovery is being tested regionally as a method to store highly treated wastewater for alternative uses. If successful, discharge from wastewater plants could be eliminated. Regional reuse systems are concurrently being constructed to transport wastewater as an alternative source to agricultural operations, golf courses and urban irrigation. Nitrogen loads to Sarasota Bay have decreased by 47 percent (80 percent from wastewater treatment plants), and seagrass coverage has increased by eighteen percent (about 1751 acres) between 1988 and 1996.

Example 2: Shellfish beds reopened through construction of wetlands that filter pathogen contamination out of stormwater runoff.

The Buzzards Bay Project (http://www.buzzardsbay.org/) assisted the Town of Marion, Massachusetts in developing a constructed wetlands system to abate pathogen contamination at Sprague Cove, a shellfish-harvesting site regularly closed due to high concentrations of fecal coliforms. The discharge also adjoined a bathing area. A three-acre constructed wetland was designed to collect and treat stormwater runoff and associated nonpoint-source pollutants from a 64-acre drainage area. Within the first year following construction, sampling indicated an overall percent reduction of fecal coliform bacteria in the cove. As additional plants become established in the wetlands, it is expected that fecal coliform counts will continue to decrease.

Example 3: Development of technical assistance program to address toxic contamination from small businesses and industry.

The Narragansett Bay Estuary Program (http://home.earthlink.net/-narrabay/) set up the Hazardous Waste Reduction Program as a partnership with the Rhode Island Department of

Environmental Management and the University of Rhode Island. The Program focuses on both education and prevention. The Program provides technical assistance to businesses for pollution prevention through a waste information "hotline" and distributes information on source reduction, recycling, and chemical substitution/disposal alternatives. The Program also has developed a system for conducting onsite hazardous waste assessments for local businesses and industries. The Hazardous Waste Reduction Program has been so successful that it is now a State-funded, broad-based industrial pollution prevention program. The Program has been expanded to include information on and a collection and treatment facility (the Eco-Depot) for household toxic and hazardous wastes.

Example 4: Removal of dam to allow commercial and recreational fish to return to historical spawning areas.

The Management Plan for the Albemarle-Pamlico Sounds National Estuary Program (http://www.epa.gov/owow/estuaries/aps.htm) calls for the restoration of vital fisheries habitats by means such as replanting vegetation, repairing hydrological systems, and improving water quality. The removal of the Quaker Neck Dam (completed during the summer of 1998) successfully restored 1,054 miles of anadromous fish-spawning habitat along the Neuse River and its tributaries. This project was significant because it was the first dam ever removed specifically to benefit the environment. In April 1999, biologists reported that striped bass had returned to spawn in the lower half of the newly opened portion of the river. Other species expected to benefit include several major commercial and recreational fish species, such as American shad, hickory shad, and shortnose sturgeon. The success of the Quaker Neck Dam removal project resulted in the removal of two additional North Carolina dams for environmental purposes.

Example 5: Dissemination of brochure providing identification and eradication information for shoreline homeowners to address the uncontrolled spreading of Brazilian pepper plants.

The Tampa Bay Estuary Program (http://www.tbep.org/) provided seed money to a local homeowners association to develop a brochure on the Brazilian pepper plant. This educational leaflet provides homeowners with information on how to identify and eradicate the Brazilian pepper and where to obtain help. The brochure was distributed to citizens with shoreline homes and has been one of the Program's most popular public outreach tools.

Example 6: Development of best management practices to regulate freshwater flow and prevent irregular and inconsistent flows of freshwater to the estuary.

The Charlotte Harbor National Estuary Program's Management Plan calls for a watershed approach to surface water management (http://www.charlotteharbornep.com/). Under this approach, a watershed management plan can be created for each drainage basin in the study area that will establish minimum flows and water levels for each water body, and determine the maximum cumulative withdrawals. One such plan is the Peace River Comprehensive Watershed Management Plan, developed by the Southwest Florida Water Management District and a team of stakeholders, which helps serve as a framework for future water use decisions. This plan seeks to provide a holistic method of not only protecting water quality in the basin but also ensuring adequate water supply for urban areas, agriculture, and the environment. Activities in the Comprehensive Watershed Management Plan and related efforts by the Charlotte Harbor

National Estuary Program and the State include additional research of surface and groundwater flow conditions within the study area; the regulation of surface and groundwater withdrawals for water supply, agriculture, and industrial purposes; regulation and monitoring of flow rates of point source discharges from sewage treatment plants and industrial facilities; the use of best management practices to decrease and retain stormwater runoff; the issuance of water use permits; and public education programs. Two community education programs related to water use for landscaping include xeriscaping and the Florida Yards and Neighborhoods Program.

Example 7: Development of priority list and GIS map of habitat sites for restoration and acquisition.

Through an ongoing process, the New York-New Jersey Harbor Estuary Program Habitat Work Group (http://www.epa.gov/region02/water/nep/nep.htm) developed a list and GIS map of priority habitat sites for restoration and acquisition. This information is being used by the States, Federal partners, and others to identify appropriate restoration and acquisition projects. The map and the tireless activity of the work group have resulted in the funding of millions of dollars worth of restoration projects. One of the major sources of funding has been the multi-million dollar New York State Clean Air-Water Bond Act. The map has also been used by the Corps of Engineers to refine their list of sites to be included in the Hudson-Raritan Reconnaissance Study, an effort that may ultimately result in the restoration of hundreds of acres of habitat.

Example 8: Clam beds reopened through water quality improvements due to increased municipal sewerage coverage.

In November 2000, the Seabrook Middle Ground was reopened to clamming for the first time in nearly 10 years. This reclassification points to marked water quality improvements largely due to increased municipal sewerage coverage in the Town of Seabrook and other smaller scale pollution control measures. The water testing, pollution source identification and reduction work that has made this reclassification possible has been a cooperative effort by the New Hampshire Estuaries Project (http://www.epa.gov/owow/estuaries/nhe.htm); NH Department of Health and Human Services; NH Fish and Game Department; NH Office of State Planning; NH Department of Environmental Services; the Towns of Seabrook, Hampton, and Hampton Falls; and a number of dedicated volunteers from Great Bay Watch and area towns. The reclassification of the Seabrook Middle Ground represents a significant increase in the area and number of shellfish available for recreational harvest by New Hampshire residents.